# Patterson Farms Methane Digester Project

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# Patterson Family Farming

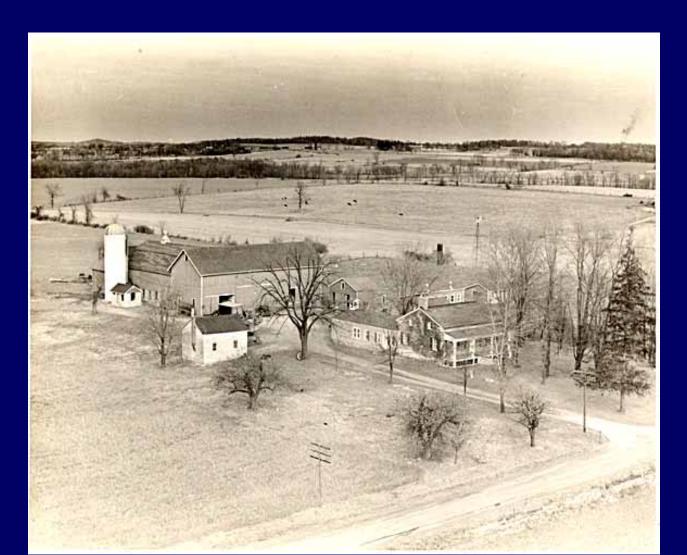
1828-2007

7<sup>th</sup> Generation now Living in original house.



# Patterson Family Farming

1938: Fairfield Farms



# Patterson Family Farming

1972 W. W. Patterson, Inc.



## From Ashes to Agribusiness

1990: 100 Cow Barn Destroyed in Fire 1992: 400 Cow Freestall and Double 12 Parlor



## Manure Management 1998-1999

Lagoon and Compost Facility Added

Manure
Solids
Separated
and Used
as
Bedding



#### Problem: Lagoon Manure Stinks!



#### But...Heated Solids Smell Like Dirt



# Will Heating Liquids Have the Same Effect?

Anaerobic Digestion Becomes a Quest

RCM Digesters, Inc. Chosen Because of Track Record

## Fall 2003: 1.2 Million in Funding

#### PROJECT IS A GO!!



- \*NYSERDA
- \*USDA---Rural Dev.
- \*AEM-Non-point source



#### Concrete Tank- Oct.-Dec.-04



# New Electrical Service for Net Metering





#### Note Phone



# Engine and Skids Arrive 8/05 Martin Machinery, LLC.



# Putting the Pieces Together



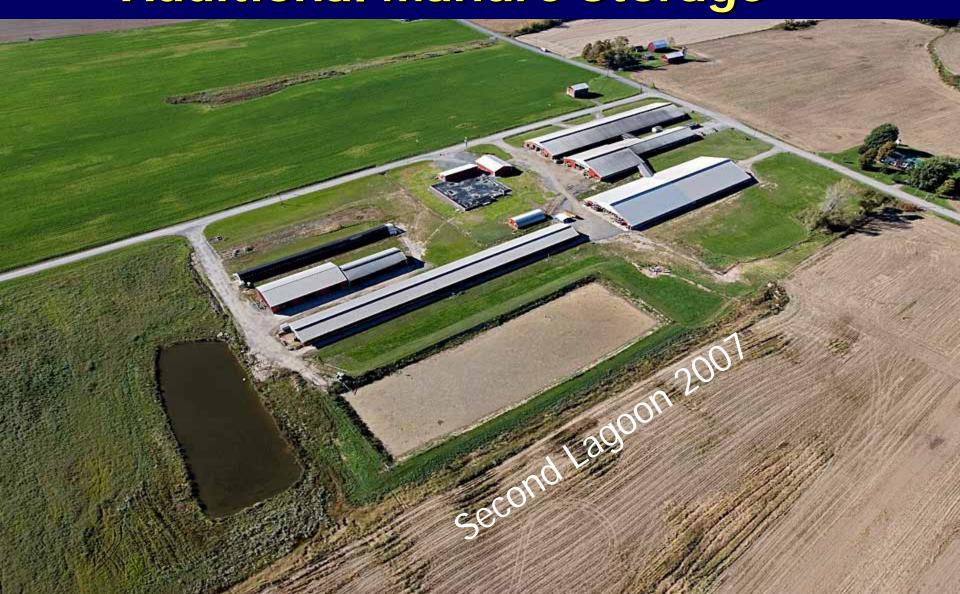


# Solids Separation





#### **Additional Manure Storage**



# Digester Financials Very Difficult to Pay for with Milk Profits

Costs:

\$1,575,025

Balance Sheet:

\$257,000

# Original Business Plan Swap Electric Costs/Digester

Electric Bill Savings:	\$72,000
Repairs/Supplies to System	\$46,000
Labor	\$26,000
Net Costs	

# Accepting Food Waste Complete Mix Digester



# Accepting Food Waste Adds Revenue

Food Waste Permit Renewed 18,000 gallons/day

Current: 15,000 gallons/day

(\$0.06/gallon)

Revenue: \$350,000

#### Future Business Plans

Carbon Credits/Renewable Energy Credits

Manure Solids Sales/Improved Bedding

Profitable Use of Excess Energy (Researching)

More Electricity - Renewable Portfolio Standards

Side Business - Greenhouse or Biodiesel

Grant Possibilities – AEM for Buried Manure Pipe Equipment for Manure Irrigation Methods

#### Lessons Learned

Must Be Committed to Make it Work

Talk to Other Dairy Producers

Do the Paperwork (Grants)

Stay on Top of It

Improvise, Improvise, Improvise!

# Why!!!! Patterson's 7<sup>th</sup> Generation

